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A Further New Species of Cypraeidae from Southern Madagascar (Mollusca: Gastropoda: Cypraeidae)

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With 5 figures

Summary

Palmadusta consanguinea **sp.n.** is described from the south of Madagascar. It is closest related to *Palmadusta androyensis* Blöcher & Lorenz, 1999, but differs in having three darker transverse bands on a paler orange-brown dorsum compared to two paler bands on a dark chestnut dorsum in *P. androyensis.* The labral teeth are more numerous in *P. consanguinea* sp.n. than in *P. androyensis.*

Zusammenfassung

Palmadusta consanguinea **sp.n.** aus dem Süden Madagaskars wird beschrieben und mit *P. androyensis* Blöcher & Lorenz, 1999 verglichen. Bei der neuen Art ist der Rücken orangebraun, mit drei dunkleren Querbändern, während er bei *P. androyensis* dunkelbraun ist und zwei hellere Bänder aufweist. Die Labralzähne bei *P. consanguinea* sp.n. sind zahlreicher als bei *P. androyensis.*

Contents

1. Introduction 1
2. Description of *Palmadusta consanguinea* **sp.n.** 2
3. *Palmadusta consanguinea* **sp.n.** and *P. androyensis,* a pair of sibling species 4
4. Literature 4

1. Introduction

After *Palmadusta androyensis* Blöcher & Lorenz 1999 was discovered in the south of Madagascar, another species has come to our attention. It seems to represent a somewhat rarer sister-species occurring alongside with *androyensis.*

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2. Description of *Palmadusta consanguinea* sp.n. (Figs. 3–5)

Holotype: 16,2×11,0×8,5; 17/13 (coll. Staatliches Museum für Naturkunde Stuttgart, SMNS Inv.-Nr. ZI 30 466)[1].

Paratype 1: 15,1×9,6×7,4; 17/13 (coll. BLÖCHER); – Paratype 2: 18,3×12,4×9,3; 18/13 (coll. BLÖCHER); – Paratype 3: 16,2×10,2×7,7; 17/14 (coll. LORENZ); all types are well preserved, fresh dead collected.

Further material: One subadult specimen (coll. LORENZ). About ten freshly beached and at least fifty further eroded specimens are known to us.

Type locality: Southern Madagascar, between Manambovo and Mandrare River deltas. All specimens known to us were collected by local fishermen.

Etymology: The name *consanguinea* (latin: blood-brother) gives credit to the common characters of the new species and *P. androyensis* in comparison with other known Cypraeidae.

Description: Shape and structure: Evenly oval-pyriform, depressed and callous. The base is callous and convex. The margins are rather angular, expanded and somewhat bent up towards the dorsum on both sides, framing the shell, forming depressions on either side of the anterior extremity. The spire is umbilicate, half covered with callus. The extremities are blunt and short. The teeth are fine and restricted to the aperture. The first anterior columellar tooth is hardly thickened but separated from the terminal by a rather distinct gap. The anterior terminal is calloused, forming an indistinct ridge. The fossula area is steep, with three faint denticles (two to three in the paratypes). The aperture is narrow, distinctly curved posteriorly, not widening anteriorly.

Coloration: The dorsal ground colour is saturate orange-brown. There are three narrow bands crossing the dorsum. The two outer ones are dark brown, interrupted by white dots, the middle band is somewhat narrower and also brown but not interrupted with paler colour. The margins are pale brownish, not separated from the dorsum by a paler zone. Base and margins are spotted with darker brown. This spotting extends onto the extremities and towards the dorsum. The extremities are somewhat darker brown, but not blotched. There is no secondary adult pattern even in shells retaining the enamel. The animal characteristics are unknown.

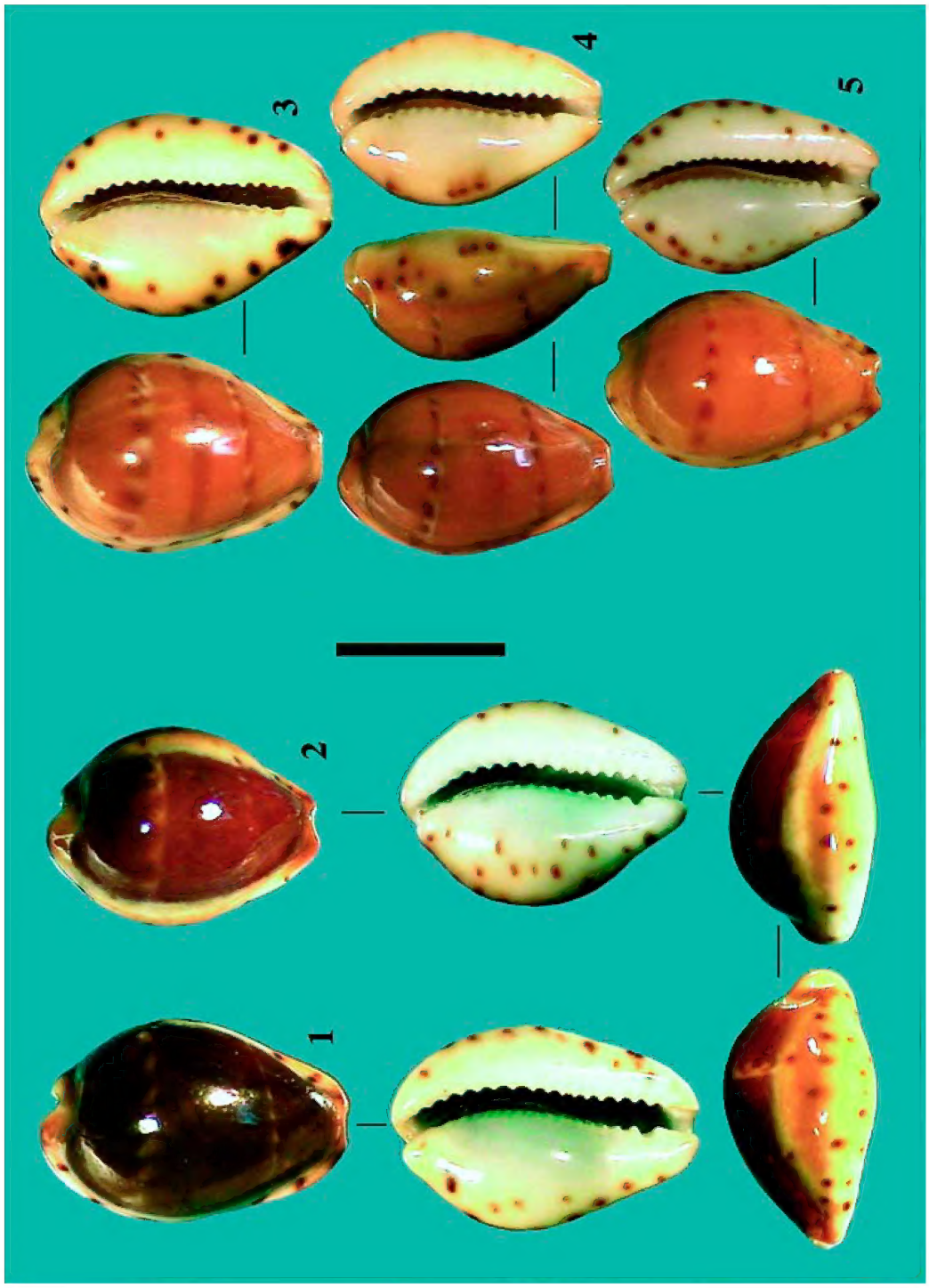
In a subadult specimen (coll. LORENZ) the protoconch is still exposed. It is small and paucispiral, showing a regular cancellate sculpture typical for species with a planctonic veliger stage.

Discussion: *Palmadusta consanguinea* sp.n. resembles *P. androyensis* almost completely (Figs. 1–5). It differs from this species by the paler orange-brown instead of purplish dark brown dorsal colour, by the transverse banding consisting of darker brown interrupted with white, instead of the mostly uninterrupted white

[1] Measurements and data enumerated: length × width × height [mm]; labral teeth/columellar teeth (depository).

Figs. 1–2. *Palmadusta androyensis,* freshly collected specimen, S Madagascar; between Manambovo and Mandrare River deltas, on beach. – 1. Dorsal, ventral and lateral view (coll. LORENZ); – 2. callous specimen, dorsal, ventral and lateral view (coll. LORENZ).

Figs. 3–5. *Palmadusta consanguinea* **sp.n.** from S Madagascar, between Manambovo and Mandrare River deltas, on beach. – 3. Holotype, dorsal and ventral view (SMNS ZI 30466); – 4. paratype 1, dorsal, lateral and ventral view (coll. BLÖCHER); – 5. paratype 3, dorsal and ventral view (coll. LORENZ). – Scale (1–5): 1 cm.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banding in *P. androyensis.* Finally, the darker third middle-band seen in *consanguinea* is always absent in *androyensis.* These features of the dorsal coloration in our opinion justify a separation on species-level (see SCHILDER & SCHILDER 1938, 1952, 1968; BURGESS 1985), especially due to the fact that both taxa share the geographical region without forming intermediate stages (BUTLIN 1987). This we can state almost with certainity – since the describing *androyensis* we have had the opportunity to study several hundred specimens of this species. Other conchological differences are the significantly more numerous labral, and less numerous columellar teeth in *consanguinea,* as well as a fossula region with fewer or no denticles. The aperture in this species is also somewhat more curved posteriorly. In the specimens known to us, the marginal spotting in *consanguinea* is less dense, and there is no paler zone separating the dorsum from the margins as in *androyensis.*

Habitat and distribution: The habitat is unknown but probably upper sublitoral, judging from the moderately good conditon of the beached type specimens.

The specimens known to us were collected on the beaches between the deltas of the Mandrare and Manambovo rivers (the latter mostly dry), southwest of Fort Dauphin, southeastern Madagascar. Further findings were made on beaches in the southwest of this country from about the 24th degree latitude southwards. It is probable that the range of the species covers the whole southern tip of Madagascar.

3. *Palmadusta consanguinea* sp.n. and *P. androyensis,* a pair of sibling species

The two closely related species, *consanguinea* and *androyensis* occur within the same geographic area on the southern tip of Madagascar. Whether they also share the same habitat is not known at present. Such pairs of sibling species are a well known phenomenon in the genus *Palmadusta.* The respective conchological differences between *P. lutea* Gmelin, 1791 and *P. humphreysii* Gray, 1825, *P. diluculum* Reeve, 1845 and *P. d. virginalis* Schilder & Schilder, 1938, *P. clandestina* Linné, 1767 and *P. artuffeli* Jousseaume, 1876 are very slight and mainly features of coloration and dentition. These pairs share at least a part of their distributions, without forming intergrading stages (SCHILDER & SCHILDER 1952; LORENZ & HUBERT 1993).

4. Literature

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